AMENDMENTS TO THE CLAIMS:

The following listing of claims supersedes all prior versions and listings of claims in this application:

1-72. (Cancelled)

73. (Currently Amended) An adaptive overload control method for controlling the amount of traffic offered by a plurality of network access points to a network access controller for processing, the plurality of network access points being arranged under control of said network access controller to provide said traffic with access to a communications network, the method enabling said network access controller to externally control the amount of traffic which it processes by regulating the rate of offered traffic, the method comprising:

(a) at the network access controller using at least one programmed processor to:

determine if an overload condition exists, and if so,

(i) generate at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network, the global constraint including a global gap interval; and

(ii) communicate said at least one global traffic constraint to one or more of said plurality of network access points; and

(b) at each respective network access point receiving said at least one global traffic constraint, using at least one programmed processor to:

(i) process the received global traffic constraint to determine a plurality of local gap interval constraint conditions for the respective network access point by:

determining a local gap interval (Δt) to be imposed on traffic received by said respective network access point, the local gap interval being determined by scaling the global gap interval in dependence on the capacity of said respective network access point; and

determining an initial local gap interval (Δt0) which differs from the determined local gap interval (Δt), wherein each initial local gap interval (Δt0) is determined independently by each respective ones of said plurality of network access points to bc between zero and the local gap interval (Δt) for said respective network access point; and

(ii) impose said loeal initial gap interval (Δt0) at each of said plurality of network access points directly responsive to receipt of a global gap condition and before further traffic is received at the respective network access point for admittance to said communications nctwork.

74. (Previously Presented) A method as claimed in claim 73, wherein said traffic comprises communications call-related traffic.

75. (Previously Presented) A method as claimed in claim 73, wherein the network access controller analyses the rate at which traffic is offered to the network access controller to determine said at least one global traffic constraint.

76. (Previously Presented) A method as claimed in claim 73, wherein the network access controller determines if an overload condition exists at the network access controller from the aggregate rate at which traffic is offered by all of said plurality of network access points to said network access controller, and wherein said at least one global constraint is derived from said aggregate offered traffic rate.

77. (Previously Presented) A method as claimed in claim 73, wherein the network access controller analyses the rate at which traffic is rejected by the controller to determine said at least one global traffic constraint.

78. (Previously Presented) A method as claimed in claim 77, wherein the network access controller determines if an overload condition exists at the network access controller from a reject rate comprising a rate at which the traffic offered by all of said plurality of network access points to said network access controller is rejected, and wherein said at least one global constraint is derived from the reject rate.

79. (Previously Presented) A method as claimed in claim 74, wherein said network access controller determines said at least one global traffic constraint by analyzing the rate at which off-hook signalling messages are rejected by the network access controller.

80. (Previously Presented) A method as claimed in claim 73, wherein the aggregate distribution of intervals imposed by all of said network access points under the control of the network access controller is randomized at the onset of the local gap interval (Δt) constraint imposed by each said network access point.

81. (Previously Presented) A method as claimed in claim 80, wherein said randomization is imposed individually by each network access point generating an initial local gap interval ($\Delta t0$) whose duration is determined by a random process.

82. (Previously Presented) A method as claimed in claim 80, wherein said randomization is imposed individually by each network access point implementing said local gap interval (Δt) constraint immediately following processing of the global constraint information received, and wherein the time for the global constraint information processing to be completed following the network access controller generating said global constraint information varies for each of said plurality of network access points.

83. (Previously Presented) A method as claimed in claim 73, wherein in said step of communicating said at least one global traffic constraint to one or more of said plurality of network access points, at least one global traffic constraint is multicast to one or more of said plurality of network access points.

84. (Previously Presented) A method as claimed in claim 73, wherein the initial local gap interval ($\Delta t0$) is determined at each network access point using a random or pseudo-random technique.

85. (Previously Presented) A method as claimed in claim 79, wherein said communications network is a VoIP network, and said traffic comprises call-related traffic.

86. (Previously Presented) A method as claimed in claim 79, wherein said network access controller is a Media Gateway Controller and each of said plurality of network access points comprises a Media Gateway.

87. (Previously Presented) A method as claimed in claim 73, wherein a global traffic rate constraint is determined by said network access controller for an address.

88. (Previously Presented) A method as claimed in claim 73, wherein the number of lines along which a network access point receives traffic for transmission across the

communications network and a scalable gap interval determined by the network access controller based on the aggregate traffic offered to the network access controller by all contributing network access points are used to determine said local gap interval (Δt).

89. (Previously Presented) A method as claimed in claim 73, wherein a dial-plan is implemented by a network access point to make it unnecessary to send an off-hook condition message to the network access controller when a local gap interval (Δt) constraint is being imposed.

90. (Previously Presented) A method as claimed in claim 73, wherein each network access point determines the initial gap interval ($\Delta t0$) using a probabilistic method.

91. (Previously Presented) A method as claimed in claim 73, wherein the initial gap interval ($\Delta t0$), if not zero, is determined by each network access point such that all of the network access points' initial gap intervals ($\Delta t0$) are uniformly distributed in the range from zero to the local gap interval (Δt) determined by each network access point.

92. (Currently Amended) An adaptive overload control system for controlling the amount of traffic offered by a plurality of network access points to a network access controller for processing, the plurality of network aecess points being arranged under control of said network access controller to provide said traffic with access to a communications network, the

system enabling said network access controller to externally control the amount of traffic which it processes by regulating the rate of offered traffic, the system comprising:

(a) at the network access controller:

(i) means for determining if an overload condition exists;

(ii) means responsive to the determination that an overload condition exists for generating at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network, the global constraint including a global gap interval; and

(iii) means for communicating said at least one global traffic constraint to one or more of said plurality of network access points, and

(b) at each respective network access point:

(i) means for receiving said at least one global traffic constraint;

(ii) means for processing the received global traffic constraint to determine a plurality of local gap interval constraint conditions for the respective network access point by:

determining a local gap interval (Δt) to be imposed on traffic received by said respective network access point, the local gap interval being determined by scaling the global gap interval in dependence on the capacity of said respective network access point; and

determining an initial local gap interval ($\Delta t0$) which differs from the determined local gap interval (Δt), wherein each initial local gap interval ($\Delta t0$) is determined

independently by each respective ones of said plurality of network access points to be between zero and the local gap interval (Δt) for said respective network access point; and

(iii) means for imposing said local initial gap interval ($\Delta t0$) at said respective network access points directly responsive to receipt of a global gap condition and before further traffic is received at the respective network access point for admittance to said communications network.

93. (New) The method as in claim 73, wherein the global gap interval is scaled in inverse proportion to the capacity of said respective network access point to determine the local gap interval

94. (New) The system as in claim 92, wherein the global gap interval is scaled in inverse proportion to the capacity of said respective network access point to determine the local gap interval.